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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/344,826	06/25/1999	KOK S. CHEN	P2290	9502

7590 04/05/2006
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EXAMINER
BRINICH, STEPHEN M

ART UNIT PAPER NUMBER

2625

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/344,826

Applicant(s)

CHEN ET AL.

Examiner

Stephen M. Brinich

Art Unit

2625

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,5-11,13-19 and 21-67 is/are pending in the application.
- 4a) Of the above claim(s) 44-67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,5,7-11,13,15-19,21,23-27,30-33,36-39,42 and 43 is/are rejected.
- 7) ☒ Claim(s) 6,14,22,28,29,34,35,40 and 41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 2-3, 5, 7-11, 13, 15-19, 21, 23-27, 30-33, 36-39, & 42-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Denda et al (JP 08044313 A).

Re claims 2, 7-10, 15-18, & 23-25, Denda et al discloses (Abstract; Figures 2 & 4) a halftone arrangement in which a halftone signal for odd number frames and even number frames are generated by applying two different halftone techniques to the image pixels. The halftone technique for odd frames differs from the halftone technique for even frames in that they use different error diffusion parameters to diffuse the halftone thresholding error. Thus, the technique is inherently changed for each new halftoning operation, since each new image represents a transition from an odd frame to an even frame or vice versa.

Re claims 3, 11, & 19, the results of the two halftone techniques are successively output (odd frame, even frame, odd frame, even frame, etc).

Re claims 5, 13, & 21, the described use of the error diffusion parameters inherently requires that they be stored in some form of memory for at least the time that the apparatus carries out calculations using them.

Re claims 26, 32, & 38, the resulting halftone frames generated from input images via these two halftoning arrangements are output as corresponding frames of an output image.

Re claims 27, 33, & 39, Denda et al discloses a halftoning process applied to the entire image, which inherently requires the starting of the halftone process with the first pixel thereof.

Re claims 30-31, 36-37, & 42-43, Denda et al discloses (Figures 2 & 4) a tiled spatial halftone pattern.

Allowable Subject Matter

4. Claims 6, 14, 22, 28-29, 34-35, & 40-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Re claims 6, 14, & 22, the art of record does not teach or suggest the recited real-time halftone determinations.

Re claims 28-29, 34-35, & 40-41, the art of record does not teach or suggest the recited offsetting of the starting location after a certain number of images have been halftoned.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mano et al discloses an example of a halftone arrangement using different display parameters for odd and even frames.

6. Any inquiry concerning the contents of this communication or earlier communications from the examiner should be directed to Stephen M. Brinich at 571-272-7430.

Any inquiry relating to the status of this application or proceeding or any inquiry of a general nature concerning application processing should be directed to the Tech Center 2600 Customer Service center at 571-272-2600 or to the USPTO Contact Center at 800-786-9199 or 703-308-4357.

The examiner can normally be reached on weekdays 7:00-4:30, alternate Fridays off.

The examiner's unit designation has been changed from "Art Unit 2624" to "Technology Division 2625" (as of March 20, 2006).


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Art Unit: 2625

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If attempts to contact the examiner and the Customer Service Center are unsuccessful, supervisor David Moore can be contacted at 571-272-7437.

Faxes pertaining to this application should be directed to the Tech Center 2600 official fax number, which is 571-273-8300 (as of July 15, 2005).

Hand-carried correspondence may be delivered to the Customer Service Window, located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314.


Stephen M Brinich
Examiner
Technology Division 2625

smb
March 30, 2006